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ABSTRACT

This paper begins with a section that describes characteristics of knowledge management in libraries, including: human resource management is the core of knowledge management in libraries; the objective of knowledge management in libraries is to promote knowledge innovation; and information technology is a tool for knowledge management in libraries. The second section addresses the content of knowledge management in libraries, including knowledge innovation management, knowledge dissemination management, knowledge application management, and human resources management. The third section discusses technology for realizing knowledge management in libraries, including: (1) the CKO (Chief Knowledge Officer) system; (2) realizing a seamless combination of library business management with knowledge management during the business process reorganization of libraries; and (3) rebuilding the library culture by using the theory of knowledge management. (MES)

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Knowledge Management in Libraries in the 21st Century

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Abstract

The knowledge economy is a new concept that has appeared worldwide in recent years. As a sub-discipline of the knowledge economy, knowledge management is a completely new concept and method of management. It works for converting intellectual assets of workers and staff members in the organization into higher productive forces - competition power and new value. Knowledge management requires linkage of information with information, information with activities and information with man - so as to realize the sharing of knowledge (including tacit and explicit knowledge). The conventional functions of a library are to collect, process, disseminate, store and utilize document information to provide service for the society. In the knowledge economy era, the library will become a treasure-house of human knowledge, participate in knowledge innovation, and become an important link in the knowledge innovation chain. In the 21st century, the library will inevitably face the new subject of knowledge management.

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Paper

Introduction

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Knowledge economy is a knowledge-based economy. In the knowledge economy era, the management refers to effectively identify, acquire, develop, resolve, use, store and share knowledge, to create an approach to transforming and sharing of tacit and explicit knowledge, and to raise the emergency and innovation capability by utilizing the wisdom of the team. Since knowledge has become the driving force for social development, the attention of the society to information and knowledge is rising and people's demands for information and knowledge are increasing step by step. This has provided a good environment for library development [1]. Moreover, as information and knowledge has become an important productive factor for the modern economic system, the society will inevitably require intensified management of information and knowledge. How to manage knowledge will become an important subject facing libraries in the near future. Knowledge management in libraries should be focused on effective research and development of knowledge, creation of knowledge bases, exchange and sharing of knowledge between library staffs (including its users), training of library staff, speeding up explicit processing of the implicit knowledge and realizing of its sharing.

Characteristics of Knowledge Management in Libraries

The role of knowledge management in libraries will become more and more important along with the development of knowledge economy. It is a new management mode, boasts the following superiority and characteristics incomparable with conventional management:

Human Resource Management Is the Core of Knowledge Management in Libraries

The most important resource in the knowledge economy system is the talents who grasp knowledge. The talent competition has become the focus of market competition in the knowledge economy era. In the knowledge economy era, the libraries will attach importance to vocational training and lifelong education of library staffs to raise their scientific knowledge level and ability of acquiring and innovating knowledge. They also will and fully respect the human value, guide and bring into play wisdom potentialities of library staffs, take developing knowledge resources in the brains of library staffs as an important way for rising work efficiency. An all-round improvement of library staff's quality and positioning of the human value will become important objectives of knowledge management in libraries.

The Objective of Knowledge Management in Libraries is to Promote Knowledge Innovation

Knowledge innovation is the core of the knowledge economy society. As bases for collection, processing, storage and distribution of knowledge and information, libraries represent an indispensable link in the scientific system chain, an important link in the knowledge innovation. Secondly, libraries take part in scientific research process directly. The library work is a component of knowledge innovation. Thirdly, libraries must pay attention to diffusion and conversion of knowledge. They act as bridges for turning the results of knowledge innovation into realistic productive forces. Knowledge management in libraries is to promote relationship in and between libraries, between library and user, to strengthen knowledge internetworking and to quicken knowledge flow. In the knowledge economy era, libraries will carry out researches on development and application of information resources, construction of virtual libraries,

protection of intellectual property rights in the electronic era etc., thus founding the base for knowledge innovation [2].

Information Technology Is a Tool for Knowledge Management in Libraries

Knowledge acquisition is the starting point of knowledge management in libraries. The application of information technologies enlarges the scope of knowledge acquisition, rises knowledge acquisition speed and reduces knowledge acquisition cost. It is impossible to accomplish such important tasks by using man's brains only in the modern society in which the knowledge changes with each passing day. It will be possible to link closely knowledge sources and knowledge workers by computer networks, thus constructing knowledge networks in libraries based on realization of single-point informatization [3].

The knowledge acquired must be accumulated and converged into knowledge warehouses of libraries. The priority of information technologies in the field of knowledge storage not only finds expression in quantity, but also in retrieval, sorting and security of the knowledge. Information technology is also indispensable in the application and exchange of knowledge and other fields. It functions as a source and tool for knowledge innovation.

Contents of Knowledge Management in Libraries

As a completely new method of management, knowledge management in libraries leaves much to be desired in its theoretical system. In my opinion, knowledge management in libraries should include such respects as follows:

Knowledge Innovation Management

Knowledge innovation management in libraries refers to the management of the production, diffusion and transfer of knowledge as well as of the network systems constructed by related institutions and organizations. It includes three aspects, namely, theoretical innovation management of knowledge, technical innovation management and organizational innovation management.

Theoretical innovation management is to enrich and enlarge the theoretical and practical research fields of library science and information science through pursuing the latest development trends in library science the world over. Technical innovation management is to manage the network systems constructed by institutions and organizations that relate to the full course of technical innovation. In their evolution from conventional libraries to electronic libraries, or digital libraries, Libraries should make technical breakthroughs and progress and build up technical facilities to support knowledge management. Organizational innovation management is to create a set of effective organizational management systems adaptable to the requirements in the electronic library era to support and strengthen knowledge management activities, by optimizing the functional departments and operation procedures of libraries.

In these systems, it firstly requires that leaders who take charge of knowledge management activities should undertake to formulate the management plans and coordinate all knowledge management related activities. Secondly, it requires establishment of special leading groups of

knowledge flow for accomplishing all tasks relating to knowledge management activities. Electronic resources committees are established composed of various types of specialists to take charge of evaluating, procuring and creating the electronic resources on the one hand, and coordinating activities of business departments and spurring them on to close cooperation in such fields as procurement and organization of the electronic information resources as well as providing services on the other hand [4].

Knowledge Dissemination Management

Knowledge dissemination is of equal importance as compared to knowledge innovation. Knowledge creators do not have much time and energy to look for knowledge users. Though there are a multitude of knowledge users, it is very difficult to acquire knowledge that already exists in the minds of knowledge creators as restricted by various objective and subjective conditions. Therefore, libraries may play the part of knowledge tosser, use diverse media and channels to disseminate various new knowledge. In the 21st century, the Internet, with its mass information and extensive contents, will provide people with the main approach to searching knowledge and acquiring information. But now there emerge absurd, salacious, false and uncivil information resulting from seeking for commercial profits and political objectives on the Net. Therefore, it is necessary to strengthen knowledge dissemination management in libraries as follows:

1. uninterruptedly strengthening the creation of libraries' own document resources and deepening the development of document information resources;
2. continuously raising the quality of libraries' staffs and strengthening continuous engineering education of working staffs;
3. giving full play to the special role of the expert system in knowledge dissemination;
4. making a comprehensive utilization of all media to ensure security of operation of networks, and prevent online criminal activities and online dissemination of inapropriate information [5].

Knowledge Application Management

In the 21st century libraries should also attach importance to provision of services for people to acquire knowledge and achieve maximum functions and efficiency of knowledge information. Therefore, knowledge services based on high-speed information networks should be carried out by:

1. Setting up virtual libraries or information centers for enterprises, governments, public organizations and scientific research institutions. It is difficult for an enterprise or a social organization to put sufficient manpower, material and financial resources on information gathering, organizing and developing. It is also impossible and unnecessary to spend a large amount of funds on information resources for their own use. Libraries can create virtual libraries or information centers for these organs separately according to their respective information requirements by using abundant information resources on the high-speed information networks.
2. Setting up digitized knowledge services which is actually a development trend of libraries in the 21st century. This presupposes: creating step by step the users-oriented information service systems

such as information dissemination, information search and special supply of information; quickening the creation of digitized libraries; studying the methods, means and techniques of information distribution and search with the Internet as the base and WEB technique as the core.

3. Digitizing libraries' resources. The electronic libraries or digitized libraries are the technical modes and development trends of libraries in the knowledge economy era. The knowledge services of libraries in the future will start with creation of databases comprising electronic journals and books in different languages that have discipline features and can operate on high-speed information networks. Great efforts should be made to transform all existing large non-electronic information resources into electronic information and integrate them into electronic libraries.

Human Resources Management

Human resources management takes it as its basic starting point to train high quality specialized talents and to revitalize the library undertaking. In practice, we should pay full attention to diversity and variation of library staffs' requirements, strengthened management of different library staffs by applying contingency management approach. That is, to some people, rigid management method is applied, rigorous supervision and control imposed, and quantity and quality requirements of work according to regulations and procedures are made clear. And, to the rest of people, more flexible management method is applied to let them participate in decision-making and consultation and undertake more jobs so as to bring their management abilities into full play and realize organizational and personal objectives. Doing well in continuous engineering education of specialized staffs, which should not only focus on the theory of library science and related disciplines, but also cover the latest technical knowledge. And strengthening professional ethics education [6].

Technologies for Realizing Knowledge Management of Libraries

One of the aims of knowledge management in libraries is to promote the knowledge exchange among library staffs, strengthen innovation consciousness and abilities, arise the library staffs' enthusiasm and abilities for learning, making the knowledge most efficiently applied to business activities of the library, and rebuilding the library into a learning organization. Therefore, the main train of thought in realizing knowledge management of libraries is a rational design of the organizational structure and business procedures of libraries, and cultural fostering, as well as modernized information support, thus creating an environment and incentive mechanism forinnovation, exchange, study and application of the knowledge.

In the Field of Organizational Structure, Business Processes and Culture of Libraries

(1) Introducing the CKO System

The Chief Information Officer (CIO) is a conspicuously high management position that has emerged successively in the government departments and large organizations in Western countries since the 1980s. The Chief

Knowledge Officer (CKO) is the highest-ranking person in charge of knowledge management, which has evolved from CIO along with the transition of information research management into knowledge management. The CKO system represents the latest development trends of the information management system of the organizations, and marks the transition of information management from the stage of information resources management to that of knowledge management. [7].

(2) Realizing seamless combination of library business management with knowledge management during the business process reorganization of libraries

Knowledge management integrates itself with the whole process of knowledge exchange, sharing, innovation and application of the organization, and becomes the key driving force for the knowledge innovation, exchange and application of the organization. The implementation of knowledge management will inevitably give rise to organization of library business process. This reorganization will also be the process of further combination of library business management with knowledge management.

(3) Rebuilding the library culture by using the theory of knowledge management

Knowledge management will inject new blood into the library culture. The main contents include: mutual trust, open exchange, studying, sharing and developing knowledge operation mechanism of libraries, enjoying the knowledge management process [8]. In a word, to make full use of knowledge, it is necessary to foster a new type of library culture suitable to its requirement. This is high level requirement of realizing technology of knowledge management.

In the Field of Information Technology

The main information technologies relevant to knowledge management includes: Internet, Intranet and Extranet; storage architectures; database management systems; metadata; data acquisition and gathering; dissemination, messaging; push and pull; information retrieval; information resources sharing; groupware; middleware; on-line analytical processing; multidimensional analysis and data mining. How to convert data to the object of knowledge management - knowledge is also relevant to some basic information technologies, mainly including data processing, reporting, networked communication, document management, information search and retrieval, relational and object-oriented databases, electronic publishing, work flow and help desks [9].

In addition, because of the differences in architecture, usage and characteristics between information and knowledge, the storage and management of knowledge are more complicated than those of information. The storage architecture technology, database management system technology and metadata are also the key technologies in knowledge management.

Conclusions

Economic environment and information environment is changing quickly

today. Knowledge management has become a powerful tool for promoting innovation and realizing reengineering the various walks of life. It occupies very outstanding position in the creation of the knowledge innovation systems of a country. How for the library circles to meet the challenge of knowledge economy and to build the knowledge management systems of libraries is a subject that demands our urgent study and solution.

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Summary

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